

DESIGNATION OF PORTIONS OF THE TOWNS OF
BREWSTER, EASTHAM and ORLEANS

as the

INNER CAPE COD BAY AREA OF CRITICAL ENVIRONMENTAL CONCERN

With Supporting Fundings

Following an extensive formal review required by the regulations of the Massachusetts Coastal Zone Management program (301 CMR 20.00 et seq) and the Massachusetts Environmental Policy Act (301 CMR 10.00 et seq), including nomination review, research, meetings, and evaluation of all public comments, I, the Secretary of Environmental Affairs, hereby designate portions of the Towns of Brewster, Eastham, and Orleans (Barnstable County) and portions of Cape Cod Bay adjacent to those Towns, as an Area of Critical Environmental Concern (ACEC). I take this action pursuant to the authority granted to me under Massachusetts G.L. c. 21A, s.2(7).

I also hereby find that the coastal wetland resource areas included in the Inner Cape Cod Bay ACEC are significant to flood control, the prevention of storm damage, the protection of land containing shellfish, and fisheries; public interests defined in the Wetlands Protection Act (G.L. c. 131, s.40; 310 CMR 10.00 et seq).

I. Boundary of the Inner Cape Cod Bay ACEC

The area generally includes the salt marshes surrounding Namskaket Creek, Little Namskaket Creek, Rock Harbor Creek, Boat Meadow River, and Herring River; Herring and Cedar Ponds; and the barrier beaches and tidal flats along the shoreline between First Encounter Beach in Eastham and Weathervane Way in Brewster. The seaward boundary is the mean low water line while the landward boundary is generally based on the 10' contour or certain man-made structures. All elevations referred to are NGVD datum as indicated on the USGS 7 1/2 minute topographic sheet of the Orleans, Mass. Quadrangle dated 1974. A map showing the ACEC boundaries is attached; a larger version is available at the Coastal Zone Management Office, 100 Cambridge Street, Boston.

Specifically the boundary is defined as follows:

Beginning at the 10' contour adjacent to Samoset Road in Eastham where it enters First Encounter Beach, the boundary follows the 10' contour around the Herring River marsh and Herring Pond. It continues along the 10' contour on the marshes north of Boat Meadow River to the landward end of the dike separating Boat Meadow Bog from the marshes. The boundary goes north across the base of the northern end of the dike and follows the

10' contour around Boat Meadow Bog, cutting across the southern landward end of the dike. The boundary continues along the 10' contour around the upper reaches of the Boat Meadow River marshes to the point where that contour intersects Smith Lane and Rock Harbor Road near the Route 6 rotary.

The boundary follows the northern side of Rock Harbor Road into Orleans until it intersects with the 10' contour. It then moves northward and westward along that contour back into Eastham, eventually crossing Dyer Prince Road, then moving southeast into Orleans to the east side of the culvert under Route 6 connecting with Cedar Pond. The area south of Route 6 including and surrounding Cedar Pond up to the 10' contour is part of the ACEC. From the west side of the Route 6 culvert (on the north side of the highway) the boundary follows the 10' contour along the south side of Rock Harbor Creek to a point approximately 550 feet east of the intersection of Rock Harbor Road and Bay View Drive thence, north across Rock Harbor Creek into Eastham to the mean sea level mark on the northern side of the Creek and generally northwest along the mean sea level line to a point where the creek and the 10' contour to the north are in closest proximity. The boundary then moves due north to the 10' contour line and follows that line around the marsh, crossing and recrossing Dyer Prince Road to a point 150' east of Windjammer Lane, thence northeast to rejoin the 10' contour. The boundary continues along the 10' contour generally east, north, and southwest to the point where it intersects Bridge Road and Charlie Noble Way. It follows the northern side of Bridge Road to the point where it again meets the 10' contour and follows that contour line generally east, northeast, northwest and southwest to the point between Bayview Road and Beach Road.

The line then runs directly west to the 10' contour (to include the barrier beach within the ACEC) and proceeds south to the end of Dyer Prince Road where it enters the Rock Harbor parking lot. From that point it runs directly south, along the west side of the parking lot to the mean sea level elevation on the northern side of Rock Harbor, thence extending westward along the mean sea level line and beyond to a point 300' outside the mouth of the harbor. The boundary then runs back to the 10' contour on the Orleans side of Rock Harbor. It follows the 10' contour around Little Namskaket Creek, including an area south of Namskaket Road, and along Skaket Beech to the end of Willie Atwood Road. The line then cuts southeast to the 10' contour, thereby including the barrier beach north of Namskaket Creek. Following the 10' contour, the line runs around the Namskaket Creek marshes, in two areas extending south of the Cape Cod Rail Trail, until it reaches Weathervane Lane in Brewster. From this point it crosses the barrier beach and extends into Cape Cod Bay on a bearing of 330 north by north-west to the mean low water line, thence generally north along the mean low water line to a point due west from the starting position. By proceeding directly east to the starting point the boundary is completed.

II. Designation of the Resources of the Inner Cape Cod Bay ACEC

In my letter of acceptance of the nomination of the Inner Cape Cod Bay area as an ACEC, I indicated that our evaluation indicated that it easily met the minimum threshold for consideration. The nomination letter clearly lists the quantity and quality of the resources present.

The presence of these resources, and their undisturbed nature, clearly indicate their value to the region and the state.

III. Procedures Leading to ACEC Designation

Initial consideration of ACEC status for the area designated herein began in February of 1982. As documented on pages 22 and 23 of the nomination letter for this area (dated 25 February 1985) informal public discussions and working meetings continued for three years with Boards and Commissions of the three Towns involved. Fifteen separate meetings are documented in the nomination letter. At these meetings the ACEC program and its ramifications were discussed and various boundary proposals were reviewed.

On 25 February 1985, a letter of nomination was signed by the Chairs of the Boards of Selectmen, Planning Boards, and the Conservation Commissions of the Towns of Brewster, Eastham, and Orleans. The letter was received in my office on 1 March 1985. Acceptance of the nomination was indicated by letter dated 8 April 1985 and the review process was begun.

Notice of the acceptance of the nomination and of an informational meeting and a public hearing was published in the Environmental Monitor of 8 May 1985. Notice was also given in the Cape Codder (16 April 1985) and CZM Newslines (8 April 1985). Several informational articles appeared in local and regional papers.

The information meeting was held on 18 April 1985 in the Eastham Town Hall with a formal public hearing at the same location on 15 May 1985. The public comment period was held open until 24 May 1985. Testimony and comments were received from 15 individuals or organizations and are on file in the CZM office at 100 Cambridge Street, Boston, MA. The public hearing was recorded with the tapes also available at the CZM office.

IV. Discussion of Factors Specified in Sections 6.48 of the CZM Program Regulations and 10.17(6) of the MEPA Regulations

In the review process leading to the decision on a nominated area, the Secretary must consider the factors specified in Section 6.48 of the CZM Program regulations and Section 10.17(6) of the MEPA regulations. As stated in these regulations, the factors need not be weighed equally, nor

must all of these factors be present for an area to be designated. While the more factors an area contains the more likely its designation, the strong presence of even a single factor may be sufficient for designation.

Based on information in the the nomination letter, presented at the public hearing and through written comments, and on research by my staff, I find the following factors applicable to the designated ACEC:

Threat to Public Health Through Inappropriate Use

As noted in the nomination letter, portions of the designated area are used for public shellfish harvesting. Inappropriate discharges, either direct or indirect, into this system could have public health repercussions through contamination of these shellfish. Salt marshes are valuable for their ability to remove contaminants from adjacent waters. Disruptions of this function of the marsh could also have detrimental effects on the quality of harvested shellfish. The high quality of the waters within the designated ACEC also makes the area safe for water contact activities.

The nine barrier beaches within the ACEC act as natural storm buffers to protect landward areas and structures from damage. The marsh system also aids in this protective role. Distruption of this protection could lead to significant storm damage to public property and private homes of shore dwellers.

Quality of the Natural Resources

The generally unaltered barrier beaches, saltmarsh, tidal creeks, and flat system are in themselves outstanding natural resources. The nomination letter and public comments refer to shellfish, fishery, recreational, and aesthetic resources. Additionally the size and nature of the area make it important breeding, feeding, and resting area for many species of birds (the nomination letter lists over 80) and mammals.

Productivity

The high productivity of estuarine/saltmarsh ecosystems has been well documented in the scientific literature. The plant growth within the marsh is exported by the tides and ultimately incorporated into the marine food web. The protected, shallow waters of the estuary act as a nursery to shellfish and finfish and the relatively high water quality of the tributaries and headwaters provides spawning sites for anadromous fishes. The ACEC includes almost 900 acres of salt marsh and thousands of acres of tidal flats.

Uniqueness of the Areas

The size of this unaltered (except for Rock Harbor) system of flats, marshes, and tidal creeks makes this area unusual for the generally developed Massachusetts coastline. As previously noted, the area is highly productive and remarkable for its natural resources. The geology

of the area is unique in that it includes the dividing line between the cliff-edged plains of Nauset and the kame fields of Eastham.

Imminence of Threat to the Resources

Cape Cod, in the past decades, has been under ever-increasing developmental pressures. All predictions see these pressures increasing even more rapidly in the future. These development activities present two particular forms of threat to the areas included within the ACEC.

First is the incremental effect of construction along the edges of the marshes and waterways. Run-off from roadways and landscaped areas can bring increased levels of nutrients to the aquatic system resulting in eutrophication, possible algal blooms, and resultant lowering of oxygen levels in the water to the detriment of marine organisms. Run-off can also carry pathogens (often indicated by elevated counts of coliform bacteria), oil and gasoline residues, or other contaminants. Even properly designed, installed and maintained septic systems can allow the leaching of nutrients into the marshes and waterways in levels that cannot be easily taken up, while failing septic systems can discharge raw sewage into surface waters.

Despite laws and regulations to the contrary, construction along marshes and waterways can also bring incremental filling over time.

Secondly, the increasing population has led to increased proposals for dredging tidal creeks and flats for boating activities. Historically this has taken place along much of the Cape, including Rock Harbor. The inclusion of Namskaket and Little Namskaket Creeks and Herring and Boat Meadow Rivers within the ACEC will prevent such pressures from leading to dredging of these creeks and flat areas.

It is hoped that this designation will serve to focus attention on the value and sensitivity of the area and will serve as a guide for future development proposals.

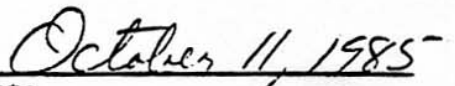
Economic Benefits

This area has intrinsic values related to the region's economic stability. Cape Cod, and each town's, economy is based on the fishing, tourism, and retirement industries. The fisheries are supported through the healthy and productive marsh and estuarine systems and serve a regional recreational, commercial and sport fin and shellfish industry centered at Rock Harbor. People come to Cape Cod communities, either to visit or live, for its unspoiled beauty, recreational opportunities, and quality of life. Tourism is supported through the bayside scenic vistas, the historical significance, and the recreational facilities of the public beaches. The retirement community is attracted to the region because of the serenity of the landscape and relatively untouched nature of the environment. Any alteration of the area that results in a decrease in its productivity, attractiveness, and use carries a potential adverse economic impact.

Other Supporting Factors

There has been virtually unanimous agreement on the appropriateness of the designation among local residents, environmental groups, and Boards and Commissions from the three Towns. Each of the Towns has taken steps to protect their natural resources and have indicated that the AECE designation will be an important part of planning and protection policies.


James S. Hoyte
Secretary of Environmental Affairs


Date